

REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and the reasons that follow. Claim 5 has been corrected to end with a period, as required by the examiner. A typographical error in Claim 17 has been corrected. Applicants respectfully submit that no new matter has been added to the claims by way of these amendments. As such, the claim amendments do not necessitate a new search by the Examiner. Claims 1-20 are now pending in the application.

A. Rejections under 35 U.S.C. § 102(e)

In Section 3 of the Office Action, Claims 1 and 4-8 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application Publication No. 2003/0149756 (Grieve). Applicants respectfully traverse the rejection.

Grieve does not anticipate Applicants' claimed invention. Simply stated, it does not teach each and every limitation required by the pending claims.

1. Claim 1

Claim 1 requires:

obtaining performance metrics for the computer system before and after configuration changes implemented in the computer system; and

assessing effectiveness of the computer configuration changes based on the obtained performance metrics.

Grieve does not teach or suggest these limitations.

In ¶ 5 of the Office Action, the Examiner contends that the Grieve abstract and Grieve ¶ 0033 teach obtaining performance metrics. Applicants respectfully disagree. The Grieve abstract teaches methods and systems comprising: (1) "comparing a first configuration file representing a . . . configuration at a point in time with a second configuration file representing a . . . configuration at an earlier point in time; and indicating when a difference exists," Grieve (abstract); and (2) "identifying [configuration] differences to an operator," Grieve (abstract). Similarly, Grieve ¶ 0033 describes an agent that "conduct[s] inquiries, return[s] configuration information, compar[es] old and new configurations, download[s] and upload[s] device firmware, direct[s] the storage of

configuration files . . . and direct[s] updates to the configuration history database.” These portions of Grieve teach a method of keeping track of configuration changes only. They nowhere so much as mention performance metrics, nor suggest that these be recorded also. Indeed, Grieve lists a number of databases that might be maintained—a *configuration* history database, a device information database, and a schedules database—but makes no mention of a database for obtaining *performance* metrics or storing them once obtained. See Grieve ¶0032. Additionally, although Grieve provides a detailed schema for one such database (¶¶ 0118–0147), that schema does not contain a single field for obtaining performance metrics or storing them once obtained. Thus, the cited references do not teach or suggest obtaining performance metrics for the computer system as required by Claim 1—before and after configuration changes or otherwise.

In ¶ 5 of the Office Action, the Examiner also cites to Grieve ¶¶ 0116–0162 as teaching a method of assessing effectiveness of the configuration changes based on the obtained performance metrics. Applicants again respectfully disagree. These paragraphs in Grieve constitute a section entitled “The *Configuration* History Database and Database Manager” (emphasis added). As the title suggests, these paragraphs describe the organization of a database for storing configuration histories and an interface for updating that database when configurations change. They teach a method of storing configuration changes, but not of assessing their effectiveness. For example, they *do* suggest a method for recovering from a configuration change that leads to network failure, but *not* one for using the *fact* of that network failure as evidence that similar configuration changes should not be applied in future. Thus, they do not teach or suggest assessing effectiveness of the computer configuration changes, and, in particular, do not suggest doing so on based on the obtained performance metrics, as required by Claim 1.

2. Claims 4–8

Claim 4 requires:

removing computer configuration changes not resulting in
performance improvements from future recommendation sets.

In ¶ 6 of the office action, the Examiner contends that Grieve ¶¶ 0026, 0045, 0049, 0072, 0080, 0082, 0098, 0114 and 0151 disclose this feature. Applicants respectfully disagree. Grieve ¶ 0026 summarizes the “new paradigm” of the Grieve invention as one that

“provid[es] to the operator a view of the *history of configurations* of network devices that *help the operator understand* the evolutionary steps that produce working and non-working networks” (emphasis added). The other cited paragraphs describe tools that make it easier to interact with this history and manually change device configurations: ¶¶ 0045 and 0049 disclose tools to manually remove devices from the network and from groups therein; ¶ 0072 discloses a tool for manually designating firmware images to be added or removed; ¶ 0080 discloses a tool for manually removing configuration files; ¶ 0082 discloses a tool for manually modifying a queue of scheduled operations; ¶¶ 0098 and 0114 disclose tools to add or remove components that report on configuration changes; and ¶ 0151 discloses a tool that informs the user when the physical make up of the network changes. The cited paragraphs thus disclose a method to show the user a history of configuration changes and to allow the user to interact with them. They do not disclose or even suggest a way to make recommendations to the user about the value of different configuration changes. Also, they do not suggest maintaining knowledge bases or other recommendation sets to guide such recommendations. Also, they do not suggest maintaining performance information to help dynamically update such recommendation sets. Thus, they do not suggest removing computer configuration changes not resulting in performance improvements from future recommendation sets, as required by Claim 4.

Claim 5 requires:

summarizing recommended actions identified for a computer user, configuration changes implemented, and the resulting change in performance.

In ¶ 7 of the office action, the Examiner contends that Grieve schedule summary **205** and ¶¶ 0042 and 0083 disclose this feature. Applicants respectfully disagree. The cited material describes two summary tools: a summary of scheduled events (schedule summary **205**, ¶ 0042) and a summary of actions taken by the user against a device (¶ 0083). The schedule summary is a list of the events that the user has specified should be run at scheduled times. The change history shows “a global view of the configuration save/restore, firmware download, survey, and device reset activity” (¶ 0083). Thus, both these tools summarize actions that the user has taken in the *past*. The cited references do not teach or even suggest summarizing *recommended* actions identified for a computer user. Moreover, they do not teach or suggest summarizing the effect on performance of actions recommended

or taken. Indeed, they do not suggest recording performance information at all. Consequently, while they do teach summarizing configuration changes implemented, the cited references do not teach or suggest either (a) summarizing recommended actions, or (b) summarizing the resulting change in performance, as required by Claim 5.

Claim 6 requires:

providing a report with performance trends on a plurality of computer systems where recommended configuration changes are not implemented.

The Examiner contends that Grieve abstract and Fig. 10 disclose this element. Applicants respectfully disagree. As described above, the Grieve abstract describes systems and methods for *identifying* configuration changes and informing the user of them. Fig. 10 shows the change history, also described above, a tool that presents a chronological list of configuration changes to the user. Thus, the cited references do not teach or even suggest analyzing performance trends. Indeed, they do not even suggest recording performance information. Moreover, they do not suggest distinguishing systems where recommended configuration changes were not implemented from those where they were. Thus, the cited references do not teach or suggest reporting performance trends on systems where recommended changes were not implemented, as required by Claim 6.

Claim 7 requires:

analyzing computer metrics on the computer system and proposing configuration changes based on the analysis of computer metrics.

The Examiner contends that Grieve ¶ 0004 and Fig. 1 disclose this element. Applicants respectfully disagree. Grieve ¶ 0004 refers to the prior art of that invention. It explains that prior systems usually provided the operator with complete information about the complete configuration of the system. Grieve Fig. 1 is a functional block diagram of an embodiment of the Grieve invention. It comprises a user interface, a database manager, a scheduler, an agent, a file-transfer mechanism, and a plurality of devices in a network. It comprises no component that analyzes computer metrics. Also, while the user interface displays a history of *past* configuration changes (see the description above of the change history), no component is described that proposes *future* changes based on an analysis of

computer metrics. Thus, the cited references do not teach or suggest analyzing computer metrics on the computer system and proposing configuration changes based on that analysis, as required by Claim 7.

Claim 8 requires that:

obtaining performance metrics for the computer system before and after computer configuration changes comprises accessing stored computer metrics in a database.

The Examiner contends that the database manager 108 and Fig. 1 of Grieve disclose this feature. Applicants respectfully disagree. As described above, neither the database manager nor Fig. 1 of Grieve teach or even suggest obtaining or recording performance metrics. The database schema provided by Grieve does not contain a field for storing such information. Moreover, as described above, the cited references do not even suggest or teach obtaining such performance metrics for a computer system before and after computer configuration changes in the first place.

Accordingly, for at least the foregoing reasons, Grieve does not anticipate Claim 1 or Claims 4–8 that depend from Claim 1. Applicants respectfully request withdrawal of the rejection of Claims 1 and 4–8.

B. Rejections under 35 U.S.C. § 103

The Examiner rejects Claims 2–3 as being unpatentable over Grieve as applied to Claim 1 and further in view of U.S. Patent No. 6,678,639 to Little et al. (Little). The Examiner also rejects Claims 9–20 as being unpatentable over Grieve in view of Little. For at least the reasons that follow, these rejections cannot be properly maintained.

1. Claims 2 and 3

Claims 2 and 3 depend from Claim 1, which requires:

obtaining performance metrics for the computer system before and after configuration changes implemented in the computer system; and

assessing effectiveness of the computer configuration changes based on the obtained performance metrics.

As described above, Grieve does not teach or suggest either of these limitations.

Little likewise does not teach or suggest either of these limitations. First, Little nowhere mentions or suggests obtaining performance metrics for the computer system, before and after configuration changes or otherwise. Indeed, where Little presents an exemplary list of the elements of the computing environment it considers, it makes no mention of anything relating to performance information. Instead, it calls for identifying “administration practices, [and] system configuration including hardware, software and the operating system” (Little (abstract); Little col. 2, ll. 10–13; Little col. 5, ll. 5–7). Thus, Little only suggests identifying information about a computer system’s configuration, not obtaining performance metrics as required by Claims 2 and 3.

Second, Little does not teach or suggest assessing the effectiveness of computer configurations changes based on obtained performance metrics. Little teaches maintaining an internal rules database, which is “a compilation of various problems that are known to exist at various configurations.” Little (abstract); Little col. 2, ll. 14–16. It teaches that each of these rules may be associated with a measure of the severity of the corresponding problem (*see, e.g., Little* col. 6, ll. 15–17). However, it nowhere teaches or suggests *changing* these measures of severity based on an analysis of performance. On the contrary, it presents a *fixed* measure of severity for each of a long list of problems its embodiments might tackle. *See Little* col. 6, l. 35–col. 23, l. 20. What is more, it organizes this list of problems on the basis of this suggested fixed measure (it has successive sections that describe “high” risk problems, “medium” risk problems, “low” risk problems, and “critical” risk problems, *Id.*), which further indicates that each suggested measure is intended to be immutable. Thus, Little suggests the *static* process of attaching a fixed measure of severity to each problem in its rules database, not the *dynamic* process of assessing the effectiveness of configuration changes based on performance metrics collected, as required by Claims 2 and 3.

Additionally, Claim 2 requires:

increasing priority values for computer configuration changes resulting in performance improvements, the priority values being used for priority of computer configuration changes in future recommendation sets.

The Examiner cites Little abstract and col. 2, ll. 09–42 as suggesting this limitation. Applicants respectfully disagree. The cited passages describe maintaining a database of rules, but nowhere suggest *increasing* priority values or measures of severity. In particular, they do

not suggest increasing the priority values for configuration changes resulting in performance improvements, in part because (as described above), Little does not suggest analyzing performance metrics at all.

Similarly, Claim 3 requires:

classifying computer configuration changes not resulting in
performance improvements as secondary recommendations in
future recommendation sets.

The Examiner writes that Little Fig. 29 and col. 7, ll. 16–col. 8, ll. 62, teach this limitation. Applicants again respectfully disagree. Fig. 29 shows how an embodiment of the Little invention deals with a specific configuration problem, viz. the installation of a large number of UDWis/SBus Host Adapters in a computer room. It shows that the number of such adapters is checked and, if there are too many, the user is informed. It does not mention or suggest reclassifying any rules—the ones dealing with this particular problem or any others—as secondary. Similarly, Little col. 7, ll 16–col. 8, ll. 62, describes how an embodiment of the Little invention deals with four specific configuration problems. In addition to the one described above, these are: the absence of current patches and firmware on an A5x00 software patch cluster; the absence of current firmware on drives of type ST118273FC; and the operation of two different models of or types of disks on a single power supply. The cited material describes performing a simple configuration check for each of these problems, alerting the user to its existence, and providing simple recommendations to fix it. Again, it does not mention or suggest reclassifying any rules as secondary. Thus the cited materials do not teach or suggest classifying computer configuration changes as secondary and, in particular, do not teach or suggest that this reclassification be driven by an analysis of performance metrics, as required by Claim 3.

A rejection under 35 U.S.C. § 103(a) cannot be properly maintained where the references do not teach or suggest each and every limitation of the claim. Grieve in view of Little does not teach each and every limitation of Claims 2 and 3.

2. Claims 9–16

Claims 10–16 all depend directly or indirectly from Claim 9, which requires:

programmed instructions configured to: . . .

collect performance metrics associated with the computer system having the identified implemented configuration changes; and

weight effectiveness of the identified implemented configuration changes.

The Examiner writes that Grieve shows the first of these, and the Little shows the second. Applicants respectfully disagree: Grieve does not show the first; Little does not show the second.

In ¶ 16 of the Office Action, the Examiner cites to Grieve abstract and ¶¶ 0033, 0116-0162 as showing the first limitation above. As described in detail above, these portions of Grieve describe collecting configuration information, not performance information.

In ¶ 16 of the Office Action, the Examiner cites to Little (abstract) and Little col. 2, ll 09–42, as suggesting weighting the effectiveness of the identified implemented configuration changes. However, as described above, the cited passages suggest only recording a measure of the severity of the corresponding potential problem. They do not teach or suggest weighting the effectiveness of the configuration change itself.

Claim 13 in particular also requires that:

proposed configuration changes with low weighted effectiveness are removed from a recommendation set.

The Examiner suggests that Grieve ¶¶ 0026, 0045, 0049, 0072, 0080, 0098, 0114, and 0151 teach this limitation. Applications respectfully disagree. As described above, the cited paragraphs disclose a system that shows the user a history of configuration changes and allows the user to interact with it. They do not disclose or even suggest weighting the effectiveness of configuration changes. Also, they do not suggest maintaining knowledge bases or other recommendation sets to make recommendations about effective configuration changes. Thus, they do not suggest removing proposed configuration changes with low weighted effectiveness from a recommendation set, as required by Claim 13.

A rejection under 35 U.S.C. § 103(a) cannot be properly maintained where the references do not teach or suggest each and every limitation of the claim. Grieve in view of Little does not teach each and every limitation of Claims 9–16.

3. Claims 17–20

Claims 18–20 all depend from Claim 17, which requires:

means for obtaining performance data for the computer systems in the network; . . .

means for obtaining performance data for the one of the computer system[s] after implementation of recommended configuration changes; and

means for adjusting relative value of the recommended configuration changes based on an evaluation of the performance data after implementation of recommended configuration changes.

The Examiner has not cited to any part of Grieve or Little that teaches or suggests these limitations. Grieve and Little do not teach or suggest these limitations.

Claim 20 in particular also requires:

eliminating a configuration change from a recommendation set where the configuration change has a low relative value.

The Examiner suggests that Grieve ¶¶ 0026, 0045, 0049, 0072, 0080, 0098, 0114, and 0151 teach this limitation. Applications respectfully disagree. As described above, the cited paragraphs disclose a system that shows the user a history of configuration changes and allows the user to interact with it. They do not disclose or even suggest computing the relative values of different configuration changes. Also, they do not suggest maintaining knowledge bases or other recommendation sets which can be updated as these relative values change. Thus, they do not suggest eliminating a configuration change from a recommendation set where the configuration change has a low relative value, as required by Claim 20.

A rejection under 35 U.S.C. § 103(a) cannot be properly maintained where the references do not teach or suggest each and every limitation of the claim. Grieve in view of Little does not teach each and every limitation of Claims 17–20.

Accordingly, for at least the foregoing reasons, applicants respectfully request withdrawal of the rejection of Claims 2, 3, and 9-20.

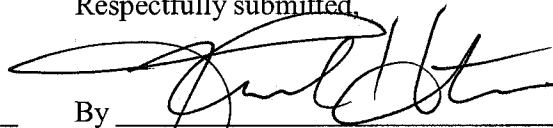
Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and the reasons cited above.

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a credit card payment being in the wrong amount, post-dated, otherwise improper or informal, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extension of time is needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extension fees to Deposit Account No. 19-0741.

Respectfully submitted,


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